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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,590	01/22/2004	Paul Gottemoller	GP-301230	3016

7590 10/29/2004

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EXAMINER

TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,590

Applicant(s)

GOTTEMOLLER ET AL.

Examiner

Thai-Ba Trieu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This application is in condition for allowance except for the following formal matters:

a. IN THE DRAWINGS:

1. The reference character **"18"** has been used to designate both **"turbocharger"** and **"compressor"** (See Figure 1). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

b. IN THE CLAIMS:

1. Claim 1 should be replaced by following:

-- comparing transmitted values of the turbine inlet temperature and the peak firing pressure with allowable maximums of these values stored in the BVCU; and

controlling the bypass valve to divert a sufficient portion of compressed air from a compressor outlet around the engine to maintain at least one of the peak

firing pressure and the turbine inlet temperature within maximum allowable values *(for avoiding double citation)*.--

2. Claim 5 should be replaced by following:

-- A method as in claim 4 wherein the peak firing pressure is computed from engine *[[geometry]]* parameters, the engine speed, the computed charge density and the fuel injection timing *(for consistency with the specification and avoiding double citation)*.--

3. Claim 6 should be replaced by following:

-- A method as in claim 1 wherein the turbine inlet temperature is computed from the computed charge air density, the engine speed, the engine load and the fuel injection timing *(for avoiding double citation)*.--

4. Claim 7 should be replaced by following:

-- A method as in claim 1 including:

determining *[[the value of]]* a NOx exhaust emission value *[[emissions]]* and transmitting the NOx exhaust emission value to the BVCU, and

controlling the bypass valve to divert a sufficient portion of compressed air from the compressor outlet around the engine to maintain NOx exhaust emissions within maximum allowable values stored in the

BVCU *(for correcting lack of antecedent basis in claims and avoiding rejection under 35 U.S.C. 112 second paragraph)*.--

5. Claim 8 should be replaced by following:

-- A method as in claim 1 including:

determining [[the value of]] a visible exhaust smoke value;

transmitting the visible exhaust smoke value to the BVCU, and

controlling the bypass valve to divert a sufficient portion of compressed air from the compressor outlet around the engine to maintain allowable smoke emissions within maximum allowable values stored in the BVCU *(for correcting lack of antecedent basis in claims and avoiding rejection under 35 U.S.C. 112 second paragraph)*.--

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Mason (US patent Number 4,356,696) discloses a turbocharger combustor system.
- Zumstein (US patent Number 4,328,672) discloses a bypass control apparatus for turbocharged internal combustion engines.
- Schwartzman (US patent Number 4,367,626) discloses a turbocharger system.

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- Kobayashi et al. (US patent Number 4,464,901) disclose a turbocharger combustor system.

- Kobayashi et al. (US patent Number 4,517,802) discloses a turbocharger combustor method.

- Meier (US Patent Number 4,833,886) discloses an internal combustion engine supercharged by means of an exhaust gas turbocharger.

- Zimmer et al. (US Patent Number 6,134,888) disclose a turbocharger control management system.

- Moraal et al. (US Patent Number 6,276,139 B1) disclose an automotive engine with controlled exhaust temperature and oxygen concentration.

- Kim et al. (US Patent number 6,470,864 B2) a turbocharged engine with exhaust gas recirculation.

- Hara (Patent Number JP 03-037328 A) discloses a turbocharged internal combustion having a bypass valve being opening/closing controlled by a controller on each detection signal of the sensors 11 and 61-63 for detecting the operation state of the engine

- Weber (Patent Number DE 3225867 A1) discloses an internal combustion engine with an exhaust turbocharger.

- Bryan Lawton (Patent Number GB 2 003 226 A) discloses turbocharged compression ignition engines.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

However, the examiner's new telephone number (751) 272-4867 will become effective after the expected changeover date of November 22, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
October 28, 2004


Thai-Ba Trieu
patent Examiner
Art Unit 3748